REMARKS

Claims 1-70 are pending in the application. The Applicants thank the Examiner for indicating the allowance of claims 15-33, 39-44 and 54-65. Claims 1-7, 9-11, 14, 34, 45, 48, 50-51, 66 and 70 stand rejected. Claims 8, 12, 13, 35-38, 46-47, 49, 52-53 and 67-69 are objected to. No claims have been amended in this paper. In view of the following, it is respectfully submitted that all of the currently unallowed claims are in condition for allowance.

Rejection of Claims 1-7, 9-11, 14, 34, 45, 48, 50-51, 66 and 70 Under 35 U.S.C. §103(a) As Being Unpatentable Over Shono

Claims 1 and 45

Claims 1 and 45 each recite modifying a pixel value only if the pixel value has a predetermined relationship to a threshold value.

For example, referring, *e.g.*, to FIGS. 4-5 and page 10, line 32 – page 11, line 15 of the present application, a circuit 100 includes a threshold comparator circuit 102, which compares pixel values of each pixel in an image to a respective threshold value. The circuit 102 provides the pixel values that are below the threshold value to a combiner 106. A random-number generator 112 generates a respective random number for each of these pixel values that are below the threshold value. The generator 112 provides the random numbers to the combiner 106. Thus, for each of these pixel values that are below the threshold value, the generator 112 provides a respective random number to the combiner 106, which combines the random number with a respective pixel value below the threshold value to generate a modified pixel value.

As alluded to by the Examiner, and described at col. 5, lines 55-65 of Shono, the comparator 23 of Shono does compare a threshold value output from a random number generator 24 with lower-order pixel bit data to binarize the lower-order data. In addition, the adder 22 of Shono adds higher-order bit data to the binarized lower-order data (*i.e.*, modifies both the lower-order and higher-order data). However, Shono unconditionally adds the entirety of the lower-order data to higher-order bit data. Similarly, Shono unconditionally adds the entirety of the higher-order bit data to the lower-order data. There is simply no teaching or suggestion in Shono that modification of the lower-order (or higher-order) data is contingent on any relationship or other condition, such as only if the pixel value has a predetermined relationship to the threshold value.

In the instant Office action, the Examiner states that "although Shono does not specifically recite the conditional operation 'only if the pixel value has a predetermined relationship to the threshold value,' it is clearly implied by Shono because the pixel value obviously has some relationship to the threshold value by virtue of being compared to the lower order pixel which is also generated from the operator 25, fig. 4." However, as discussed above, all data compared to the random (threshold) value in the comparator 23 of Shono is binarized (modified) into 1 or 0 with the random number as a threshold (*see also*, FIGS. 7-8 and col. 7, line 57 to col. 8, line 22 of Shono). As such, the pixel values compared to the random number are also modified (into either a 1 or 0) irrespective of a predetermined relationship. In other words, the random/threshold value of Shono is used to determine how, not whether, to modify the pixel values input to the comparator 23.

Claims 2-3, 5, 8-10, 46 and 48-50

Claims 2-3, 5, 8-10, 46 and 48-50 are patentable by virtue of their respective dependencies from claims 1 and 45.

Claims 11, 34, 51 and 66

Claims 11, 34, 51 and 66 each recite combining/adding a random number with/to a pixel value.

Shono, on the other hand, fails to teach or suggest a random number and pixel value being combined or added to one another. Shono, at, *e.g.*, FIG. 6 and col. 7, lines 18-24, teaches an operator 25' that divides input image data of an object pixel into higher-order bit data and lower-order bit data. The higher-order bit data are input into an operator 26' with a random number from a random number generator 24'. The operator 26' modifies the value of the random number in accordance with the higher-order bit data. Shono fails to teach in any way, however, that the operator 26' combines the random number with the higher-order bit data.

In the instant Office action, the Examiner states that "Shono does not disclose whether the operation [involving modification by the operator 26' of the random-number value] is combinational or otherwise. However, it would be obvious to the skilled in the art that the operator could also be an adder, summer, or a combiner." However, the Applicants' attorney respectfully submits that simply saying that the operator 26' could obviously be an adder, without otherwise providing specific evidence that the teachings of Shono provide a motivation to utilize the operator as an adder, is insufficient to establish that the claimed limitations are *prima facie* obvious. Moreover, since Shono includes two adders 21' and 22' coupled to the operator 26' of FIG. 6, it seems unreasonable to the Applicants' attorney that Shono would not also have designated the operator as an "adder" if Shono intended the operator to combine values in the manner alleged by the Examiner.

Claims 12-14, 35-38, 52-53 and 67-70

Claims 12-14, 35-38, 52-53 and 67-70 are patentable by virtue of their respective dependencies from claims 11, 34, 51 and 66.

CONCLUSION

The present patent application is in condition for allowance, and favorable consideration and a Notice of Allowance are respectfully requested. **The Examiner is requested to contact the undersigned at the number listed below for a telephone interview if, upon consideration of this response, the Examiner determines any pending claims are not in condition for allowance.**

In the event additional fees are due as a result of this Response, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully submitted,
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